DIVERSITY IN
GROUPS

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Abstract

Diversity has the potential to either disrupt group functioning or, conversely, be the source of collective creativity and insight. These two divergent perspectives pose a paradox that has held the attention of scholars for many years. In response, researchers have marshaled evidence to specify the conditions under which diversity leads to more positive outcomes, and explain why it does so under these conditions. After describing these foundational perspectives and more recent work that addresses this paradox, we outline several promising directions for research in this domain. We encourage researchers to develop integrative theoretical explanations, use new technologies to gain insight into group processes, study diversity in the context of virtual interaction, and take advantage of opportunities for cross-disciplinary research.

Key words: diversity, group, group composition, group process, group performance, team, team effectiveness, faultlines

Disciplines: Psychology; Sociology; Communication, Media, & Technology
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Introduction

As the world searches for answers to its most vexing problems, it is a good bet that many solutions will come from people collaborating in diverse groups. In government, business, science, health care, and almost any other domain, diverse groups are on the rise. Yet, for all their promise, diverse groups can pose major challenges for those who work in and lead them. Researchers have taken up this problem by studying collaboration among people who differ demographically, professionally, or along numerous other dimensions that increasingly characterize modern groups. The purpose of this chapter is to briefly describe the foundational research in this domain, review exciting new developments, and propose an agenda for future research.

Foundational Research

Research on group processes and performance has a long history in the social sciences, with the study of diversity rising to prominence only in the last few decades. In part, this timing reflects trends and events in the larger society. In the past, most organizations were generally homogenous in regard to gender, race, and nationality, for example, and work groups in organizations were typically composed of people with similar training and backgrounds. Several forces have combined to change these patterns, diversifying many types of groups across a variety of domains. As these societal and organizational changes unfolded, researchers became
progressively more interested in diversity’s effects on group functioning. As we describe next, two perspectives on diversity—one focused on disruptive consequences and the other on diversity’s potential benefits—took center stage in this domain.

**Social Categorization Processes and the Similarity-Attraction Paradigm**

Social categorization theories, which originated in the study of intergroup relations, quickly became a central theme in research on diverse teams. Scholars recognized early on that relations among team members from different identity groups were essentially interpersonal manifestations of broader intergroup relations. In short, group members compared themselves to one another and, in the presence of diversity, formed in- and out-group distinctions, leading to subgroup categorizations. These ideas garnered empirical support, with numerous studies showing that group members tended to favor and cooperate more with those categorized as in-group members, while derogating and distrusting out-group members. These biases were associated with intergroup conflict, poor communication, and low cohesion, which ultimately decreased team morale and performance. This perspective was reinforced by research on the similarity–attraction paradigm and homophily biases, according to which people prefer to collaborate with similar group members, increasing their sense of identification and social integration. See Williams and O’Reilly (1998) for a review of this and related perspectives.

**The Value-in-Diversity Perspective**

Other scholars countered this pessimistic perspective by proposing that differences among group members could also be a source of insight. Early laboratory experiments, for example, found that heterogeneous groups solved problems more effectively than homogenous
groups. This perspective evolved over the following decades into what became known as the value-in-diversity (or informational-diversity) hypothesis, positing that members of diverse groups bring unique perspectives to the table, creating a larger pool of available information, skills, approaches, and networks. Diversity should thus produce constructive task conflict and debate, causing team members to explore alternative solutions and conduct more thorough analyses of the issues at hand. Such processes should eventually lead to more creativity, better decisions, and higher performance relative to homogenous groups, in which members hold presumably redundant perspectives. See Mannix and Neale (2005) for a more detailed review.

**Conflicting Theories and Mixed Results**

By the 1990s it had become evident that the relationship between diversity and group performance was more complicated than just a simple positive or negative main effect. To be sure, some studies provided support for the idea that various dimensions of diversity could improve performance via the integration of divergent perspectives, but for every study supporting this direction, another study documented diversity’s negative effect on group processes, which prevented the group from leveraging its informational advantage. Researchers generally agreed that diverse teams offered great potential, but identifying when and how this potential would be realized remained elusive. With this paradox in mind, researchers shifted their focus to moderators and mediators that could help to explain the mixed effects of group diversity, coupled with efforts to bring clarity to the construct of diversity.

**Cutting-Edge Research**
Moderators of Diversity’s Effects

The idea that diversity holds the potential to either help or harm group functioning triggered a search for moderators of the relationship between diversity and group performance. As a result of this search, we now know that diversity is more likely to enhance group effectiveness when group members share a collectivistic (versus individualistic) culture (Chatman et al., 1998), an integration-and-learning perspective (versus one focused on equality or fairness; Ely and Thomas, 2001), a high level of psychological safety (Gibson and Gibbs, 2006), a history of working together for a longer period of time (Harrison et al., 1998), or high levels of interpersonal congruence (Polzer et al., 2002). Diversity is also more likely to improve performance when the task is complex and non-routine (Bowers et al., 2000) and characterized by high task interdependence (Schippers et al., 2003).

Mediators of Diversity’s Effects

In reality, most diverse groups possess both the variety of information that can create value as well as the potential for social categorization processes that can disrupt group functioning. Social categories are notoriously malleable, however; a particular social category may become psychologically activated and divide the members of one group, but have no effect in an otherwise similar group. Such variance across groups in whether social categorization processes become activated may moderate whether groups are able to utilize their diverse information. Some evidence is consistent with the idea that divisive social categorization processes impede the flow of distributed information, although this mechanism has not been tested directly (for a review, see Van Knippenberg and Schippers, 2007). Many studies of diversity invoke social categorization processes to explain how diversity affects group
functioning, suggesting that researchers should target the mediating role of these processes in future empirical research.

Conflict, meanwhile, has received ample empirical attention as a link between diversity and group performance. The central idea is that diverse perspectives can trigger disagreement about the task, labeled task conflict, which should stimulate the creativity and problem-solving activities that increase performance. Conversely, conflict stemming from interpersonal incompatibilities, labeled relationship conflict, should harm performance (e.g., Jehn, Northcraft, and Neale, 1999). Though the negative effect of relationship conflict has received consistent support, the results of task conflict are more mixed, leaving open the question of how conflict systematically mediates the path from diversity to performance (De Dreu and Weingart, 2003). Team reflexivity, the thorough consideration and discussion of the group’s functioning that is stimulated when there are divergent perspectives and ideas, is a similar mechanism. Schippers and colleagues (2003) found that diverse teams exhibited higher reflexivity, which in turn increased satisfaction, commitment, and performance.

Along with these behavioral indicators of group interaction, other mediators are related to the psychological states of group members. Commitment to the group and group identification, the perception that one belongs to the group, are two psychological states that mediate the link between diversity and group performance. Finally, social integration, the degree to which team members are attracted to the group and feel satisfied and psychologically linked to the other members, is lower in diverse teams, harming performance (O'Reilly et al., 1989). For a more detailed review of research on moderators and mediators of diversity’s effects on team performance, see van Knippenberg and Schippers (2007) and Jackson and Joshi (2011).
Unpacking and Integrating Multiple Dimensions of Diversity

Researchers have also taken another approach to resolving the paradoxes surrounding diversity’s effects by scrutinizing the construct of diversity itself, questioning the traditional approach of treating it as an aggregate construct. This work addresses the fundamental question of how different dimensions of diversity should be conceptualized, integrated, measured, and compared. In one stream of research, scholars have proposed and tested typologies designed to aggregate diversity attributes thought to have similar effects on performance. Jackson (1992), for example, distinguished between diversity attributes that were more visible (e.g., gender, age, race, functional membership, formal titles) and less visible (e.g., values, personality, sexual orientation, experience, skills), arguing that the former were more likely to stimulate the stereotypes and biases that harm performance.

Pelled and colleagues (1999) added to the visibility dichotomy a second layer, job-relatedness, reasoning that differences that shaped the “perspectives and skills pertinent to accomplishing the task,” like work experience and functional expertise, would increase task conflict and ultimately improve performance, whereas other differences that were less job-related would generate relationship conflict and thus hinder performance. Though these typologies, and others like them, have the potential to provide some much-needed conceptual coherence, empirical support has not converged on a specific way to classify multiple diversity dimensions. Webber and Donahue’s meta-analysis (2001), for example, revealed no relationship between highly job-related or less job-related diversity and team performance. A more recent meta-analysis by Horwitz and Horwitz (2007), however, found a positive relationship between highly job-related diversity and quality and quantity of team performance, with no significant results between less job-related attributes and performance.
With an eye toward measurement issues, Harrison and Klein (2007) took a different approach towards reconciling mixed evidence by questioning the traditional assumption that diversity should be operationalized as attribute dispersion. Instead, they proposed that diversity can take three different forms: 1) separation, or differences in lateral position on a continuum such that greater diversity occurs when members are polarized; 2) variety, or differences in kind or category, with a higher number of represented categories indicating greater diversity; and 3) disparity, or differences in the concentration of resources, with greater diversity occurring when vertical differences privilege a few over many. One implication of this approach is the caution that diversity dimensions measured in different ways should not be aggregated together.

The difficulty in finding support for a parsimonious typology, coupled with concerns about how to measure different forms of diversity, raises the more general issue of whether multiple dimensions of diversity should be aggregated at all. On one hand, empirical studies that include many diversity dimensions often use some aggregation strategy, in part to simplify analyses and interpretation of a large number of variables, especially when statistical power is at a premium. To be sure, this approach is broadly consistent with social categorization theories, which assume that all categorical differences share the potential to activate intergroup biases and disrupt group functioning. Other scholars, on the other hand, have advised against aggregating distinct measures of diversity, or “cross-fertilizing apples and oranges” (Lau and Murnighan, 1998). Some studies, for example, have found different effects on team performance of variables that are typically grouped together. In their 2010 meta-analysis, Bell and colleagues found that functional background diversity was positively related to team performance, while educational background, assumed to be similarly highly job-related, was unrelated to performance. Indeed, even a simple heterogeneity index measuring a single dimension can mask substantive
differences across groups; for instance, some theories would predict that a team of five men and one woman would function differently than five women and one man. Though different aggregation approaches might be appropriate for different purposes, these considerations reinforce the importance of being precise when conceptualizing and testing the relationship between various dimensions of diversity and team performance.

One theoretical approach neatly circumvents the issue of lumping together diversity attributes by type, focusing instead on how attributes are aligned across the members of a group. This approach first appeared in 1998, when Lau and Murnighan introduced the concept of faultlines. According to this approach, the impact of a specific diversity attribute is not inherent to the attribute itself, but instead depends dynamically on how other diversity attributes are distributed across the team. When team members’ multiple attributes are aligned, they demarcate homogenous subgroups that have the potential to divide the group. Strong faultlines occur when many attributes are aligned, presumably increasing conflict and decreasing cohesion and information sharing across subgroups, interfering with team performance. In a team where all women are marketers and all men are accountants, for example, gender and function faultlines split the team in the same way, increasing the strength of the two subgroups and their potential to hinder group performance. See Thatcher and Patel (2011) for a recent review of research on faultlines.

Key Issues for Future Research

Diversity scholars have come a long way in understanding the core mechanisms that explain why diversity can have positive or negative effects, while testing a variety of conditions
that tip the scales one way or the other. Moving forward, we highlight four directions with high potential to advance our understanding of group diversity.

**Advancing Theory**

We need more theoretical integration to unify the accumulating evidence of the effects of diversity. While continuing to search for new moderators, mediators, or typologies, it will help to find linkages among those that have already been identified. What underlying concepts can provide coherence across the multitude of effects in the diversity literature? And, how do these concepts relate to each other in a broader theoretical framework, one that weaves together the many threads in this literature in a parsimonious way?

Some of the developments described earlier have attracted attention precisely because they incorporate multiple diversity dimensions into a unifying framework. A compelling feature of the faultline framework, for example, is that it explains how group members’ multiple attributes operate together in a coherent manner. Similarly, Harrison and Klein’s typology simplifies the multitude of diversity dimensions into three distinct classes. A similar effort is currently underway by conflict researchers, who are rethinking the dimensions of conflict that best explain how this phenomenon varies across groups. These contributions aim to take stock of the literature in order to find underlying concepts that unify disparate results. In doing so, they provide direction for future research so that it builds toward a more coherent understanding of how groups operate as social systems.

Other domains could benefit from this kind of theoretical integration. For instance, we know many variables moderate diversity’s effects, yet we lack a coherent account of the linkages among these moderators. Several moderators seem conceptually adjacent; consider groups whose
members exhibit a collectivistic culture, an integration-and-learning perspective, a diversity mindset, psychological safety, or interpersonal congruence. In various ways, all of these somehow connect people who are different, fostering their ability to utilize and integrate their differences. This is one example of a promising area to search for underlying, unifying constructs. As scholars continue to develop more integrated theoretical accounts of the linkages among diverse inputs, processes, and outcomes, parsimony will be a key criterion in determining which of these will be most valuable.

**Studying Virtual Interaction 2.0 and Beyond**

The world seems to be shrinking. People routinely use the same devices to communicate with colleagues on the other side of the world as easily as those across the road. As organizations of all sizes extend their global reach, the era of virtual collaboration is fully upon us. Researchers have only recently begun to grapple with the effects on group functioning of electronic communication, geographical dispersion, cultural diversity, and other dimensions associated with virtual work (Gibson and Gibbs, 2006). Moving beyond the basic comparison of face-to-face and virtual groups, many new research questions arise at the intersection of virtual interaction and diversity. At a fundamental level, how do people who interact virtually perceive and manage their differences? One possibility, for example, is that differences that are highly salient during face-to-face interaction may recede into the background during virtual interaction, while other differences become more prominent (e.g., language fluency, differences in geographical location). Another question is whether people who become increasingly comfortable interacting through online social media will carry over their comfort with such virtual experiences to their group activities, closing the gap between face-to-face and virtual interaction. Moreover, if the
proliferation of virtual interaction increases exposure among people who are different, will people change their tolerance for and assumptions about diversity? These questions resonate with recent research by Phillips and colleagues, which turns conventional wisdom on its head by highlighting a variety of problems associated with homogeneity. They suggest that if diversity leads group members to question one another and surface their hidden assumptions, it may trigger healthy and useful group processes (see Phillips and Apfelbaum, 2012, for a summary). Integrating these ideas with the effects of virtual interaction could be a fruitful direction.

**Advancing Methods by Using New Technologies**

Researchers have tapped a wide variety of methods to gain insight into diversity’s effects on group functioning. Yet, all methods entail tradeoffs, and many of those used to study diversity have reliably captured overarching patterns at the potential cost of overlooking substantial variance in how group members relate to one another. For example, members of a diverse group may report, on average, that communication occurs at a moderate level, but this may mask the fact that some members communicate frequently, while others, perhaps of a different age, gender, or race, communicate very little. Moreover, communication measured at one point in time may reflect very recent patterns, or an overall accumulation, masking the reality that some group meetings suffer from poor communication, while in other meetings group members communicate quite effectively. These more granular patterns of interaction among diverse group members, including patterns of variation within groups, could be a source of great insight (Jehn et al., 2010), and researchers are beginning to use new tools equipped to capture them.

There are many new directions for gathering data about group processes. The era of “big data” in the social sciences is fast approaching, and the study of diversity in groups will
undoubtedly benefit from this trend as researchers seek new ways to gain insight. Researchers could use intensive longitudinal methods, for example, to track micro shifts in group interaction, along with variation in behaviors and attitudes of different group members. Such data is already being collected via cell phone surveys, making it relatively easy to reach research participants on a frequent and immediate basis. To track communication patterns during episodes of group interaction, researchers have used wearable devices to capture each group member’s vocal utterances, which are automatically synchronized to provide an immediate, precise, and fine-grained record of group communication patterns. Such devices make it dramatically easier and less costly to gather and analyze micro communication patterns in large samples of groups, especially when compared to the traditional approach of manually coding group videos. New technologies are also capable of tracking individual movement, making it possible to identify whether group members gather together in subgroups before a scheduled group meeting, perhaps indicating coalition activity among people with similar interests or backgrounds. Of course, increasingly intrusive technologies run the risk of invading privacy, and researchers will need to contend with the tradeoffs involved in using such methods.

Video conferencing platforms also continue to increase in quality and availability while decreasing in cost, fueling their use in groups across many organizational contexts. Because such technologies become a superior option when it is difficult or costly to meet face-to-face, group members who reside in distant locations are especially likely to use them. Consequently, because people who are most distant also tend to differ on multiple dimensions associated with location (e.g., culture, nationality), some of the most diverse groups are also most likely to use video communication options. As these technologies improve, it is becoming easier for researchers to record videoconferences, potentially providing a wealth of high fidelity video and audio footage.
of real interaction among diverse group members. Ironically, recording a videoconference is in many ways less intrusive than video recording a face-to-face meeting, because in the former case the video is an integral part of the interaction, rather than something imposed by the researcher. Taken together, these trends have the potential to provide unprecedented data in the form of recorded video interaction among group members of varying levels of diversity working on real organizational tasks.

Finally, group members also communicate via email and web-enabled collaboration platforms, and researchers are tapping into these vast sources of data to analyze interaction patterns. There are plenty of challenges involved in drawing valid inferences from the profusion of variables that researchers can generate from such data. For example, if a researcher has access to email data but not face-to-face or phone interaction, care must be exercised when drawing inferences solely from email patterns about relations among group members. Of course, traditional sources of data such as survey responses have their own limitations, which are well known and perhaps more accepted, but nonetheless limiting. Another issue is that, as anyone who has coded group interaction knows, long hours filled with many subjective judgments are required to turn large volumes of email data or video footage into a hypothesis test or an inductive insight. Technology may help with analysis as well, however, by using computational linguistics to analyze reams of text or automated computer coding of facial expressions to analyze video interactions. As these examples suggest, a wide range of methods will appear in future studies of diverse groups.

Despite the current challenges faced by researchers trying to collect and analyze new types of data, it is a safe bet that in ten years the tools for studying group interaction will include dramatically different alternatives than those in use today. The future of research on diversity in
groups will inexorably move in this direction, accompanied by the prospect of new insights waiting to be revealed.

**Exploring Cross-Disciplinary Opportunities**

Many of the future directions we have identified offer exciting opportunities for research at the intersection of different disciplines or domains. Insights about diversity in groups can be gained by moving down a level of analysis to study the individuals who comprise diverse groups, moving up a level of analysis to incorporate features of the larger contexts in which groups operate, or branching out to integrate other phenomena at the group or interpersonal level (Hackman, 2003). At the micro level, for example, social cognition researchers have made great strides in understanding how individuals encode and process social stimuli, including research on implicit attitudes and nonverbal communication. Elements of this research could be usefully linked to interaction patterns among members of diverse groups.

Research on relations between individuals is another area ripe with opportunities for integration. For example, network concepts can help predict how diverse teams might leverage their opportunity to act as brokers across structural holes, and how the different members in a team can best tap into and combine the diverse knowledge and resources their networks offer (Reagans and Zuckerman, 2001). What other insights can be gained by conceptualizing and analyzing diverse groups as small networks, characterized by all of the features studied by network scholars? Equally enticing, negotiations researchers have much to offer to the study of diverse groups. Similar to multi-party negotiations, members of diverse groups frequently hold divergent preferences and priorities, try to create value from integrating their differences, and (sometimes) cooperate to advance the shared goals of the group. When diverse groups face such
mixed-motive situations, it is useful to apply a negotiation or game-theoretic lens. An economic lens can also illuminate diversity’s benefits, as Page and colleagues have demonstrated with their economic framework for modeling diversity. Moving in the other direction, it would be instructive to learn whether the moderators of diversity’s effects also condition the outcomes of negotiating parties.

At a more macro level of analysis, group diversity research can draw from and contribute to research on cultural diversity at the organizational and societal level. Collaboration across these fields could help predict, for example, the type of diversity attributes that are more salient for group performance in different regions or industries as organizations become increasingly global. Research embedded in an American context often focuses on dimensions of primary concern in this society, such as gender and race. As scholars start shifting attention to other countries, they should explore how diversity plays out when different cultures emphasize other dimensions such as socioeconomic status, urban versus rural upbringing, religiosity, or caste. Sociologists who study larger demographic trends could lend valuable insights about the power and status of various social groups that should inform the functioning of diverse groups.

As researchers take advantage of opportunities for theoretical development, the use of new methodologies, and cross-disciplinary collaboration, they will discover new insights into the workings of diverse groups. This research domain will only increase in importance as societal problems call for more collaboration among people from every corner of the world.
REFERENCES AND FURTHER READINGS


BIOGRAPHIES

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